

Date: Thu, 9 Sep 93 04:30:12 PDT
From: Ham-Ant Mailing List and Newsgroup <ham-ant@ucsd.edu>
Errors-To: Ham-Ant-Errors@UCSD.Edu
Reply-To: Ham-Ant@UCSD.Edu
Precedence: Bulk
Subject: Ham-Ant Digest V93 #41
To: Ham-Ant

Ham-Ant Digest Thu, 9 Sep 93 Volume 93 : Issue 41

Today's Topics:

 160 Meter Antenna
 Advice needed on MFJ verticle (2 msgs)
 Antennas, Q and bandwidth
 Cellular Antenna
 Diamond/Commet mobile antenna mounts
 G5RV (2 msgs)
 Helically-wound dipoles ??
 J-pole polarity
 TH-3 Documentation wanted

Send Replies or notes for publication to: <Ham-Ant@UCSD.Edu>

Send subscription requests to: <Ham-Ant-REQUEST@UCSD.Edu>

Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Ant Digest are available
(by FTP only) from UCSD.Edu in directory "mailarchives/ham-ant".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 8 Sep 93 12:58:26 GMT
From: news-mail-gateway@ucsd.edu
Subject: 160 Meter Antenna
To: ham-ant@ucsd.edu

Am in the process of getting on 160M for the first time. I have considered
using my 135' zepp (center fed with 450 ohm line) on 160, with a tuner of
course! Can anyone offer any suggestions. A local ham has recommended tying
the two conductors of the feedline together and feeding it as a random wire...

Any suggestions.. I can probably build up a different tuner if my MN-2000 or
MFJ 949B doesn't tune correctly..

Larry KQ4BY

Date: 8 Sep 1993 19:37:00 GMT
From: news.cerf.net!pagesat!olivea!spool.mu.edu!howland.reston.ans.net!wupost!
gumby!destroyer!news.itd.umich.edu!no-name-surgery.med.umich.edu!
Jschweiger@network.ucsd.edu
Subject: Advice needed on MFJ verticle
To: ham-ant@ucsd.edu

As I'm considering installing an inexpensive multi-band verticle antenna
that must include 2 meters can anyone provide any info on their
experiences with the MFJ antenna? Pros or Cons would be helpful. 73

Date: 8 Sep 1993 20:22:59 GMT
From: news.cerf.net!pagesat!olivea!spool.mu.edu!howland.reston.ans.net!
noc.near.net!jericho.mc.com!fugu!levine@network.ucsd.edu
Subject: Advice needed on MFJ verticle
To: ham-ant@ucsd.edu

In article cp2@terminator.rs.itd.umich.edu, John Schweiger
<Jschweiger@uv1.im.med.umich.edu> () writes:
>As I'm considering installing an inexpensive multi-band verticle antenna
First of all.....^^^^^^^^^^^^^^^^^^^^^
.....is a contradiction of terms.

>that must include 2 meters can anyone provide any info on their
>experiences with the MFJ antenna? Pros or Cons would be helpful. 73
Do you want HF & VHF, or just multi-band meaning 2m/220/440?

You might not want a single 2m and HF antenna combination if you ever
want to log onto the local packetcluster and work HF simultaneously.

For multiband HF, I don't think anyone can deny that the Cushcraft R5 or
R7 are the best available. They are 10/12/15/17/20 and 10/12/15/17/20/30/40
respectively. For multiband VHF/UHF, I have had great success with Diamond
Verticals.

73 Bob

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-----FTAC

Bob Levine KD1GG 7J1AIS VK2GYN
levine@mc.com

(508) 256-1300 x247
FAX (508) 256-3599

Date: Thu, 2 Sep 1993 19:12:04 GMT

From: pravda.sdsc.edu!news.cerf.net!usc!sdd.hp.com!hpscit.sc.hp.com!
news.dtc.hp.com!srgenprp!alanb@network.ucsd.edu

Subject: Antennas, Q and bandwidth

To: ham-ant@ucsd.edu

J.D. Cronin (jdc3538@ultb.isc.rit.edu) wrote:

: Do antennas have a "Q" factor associated with them, like a capacitor,
: inductor or a tuned circuit? Does this affect the range of frequencies
: a resonant antenna can be used on?

Yes, and yes. Fortunately the Q of most antennas (dipole, 1-wave loop,
etc.) is fairly low, so you can typically expect a usable bandwidth
on the order of 10%.

: Is it possible to extend the
: useable frequency range of an antenna by lowering the Q factor
: (that is, having more resistance in it)?

Yes, but that would reduce your antenna efficiency. You are better
off to use some kind of impedance-matching network.

: And where does increasing frequency range by increasing element
: diameter fit in to all this?

Fatter elements result in somewhat lower "Q" and wider bandwidth.

AL N1AL

Date: Wed, 8 Sep 1993 15:09:19 GMT
From: pacbell.com!sjhawk2@ames.arpa
Subject: Cellular Antenna
To: ham-ant@ucsd.edu

I see many cellular telephone antennas on the cars around me every day. From the bottom up they look like a quarter wave stub then a small coil, than a half wave section. Are there formula for calculating the dimension of the coil? And is this the correct configuration of the antenna. de WV6U 73 49 0100 1001

Date: 8 Sep 93 18:11:04 GMT
From: ogicse!uwm.edu!vixen.cso.uiuc.edu!howland.reston.ans.net!spool.mu.edu!
mixcom.com!kevin.jessup@network.ucsd.edu
Subject: Diamond/Commet mobile antenna mounts
To: ham-ant@ucsd.edu

I have a general question about Commet or Diamond mobile antennas and mounts.

I currently have a Cushcraft CS270 2-meter/70-cm dual-band mag-mount mobile antenna that is working quite well. Quoted gain figures in the AES catalog are about 3dB and 6dB (note no mention of dBi or dBm).

The mag-mount can of-course scratch the paint on the car even with the most careful application and removal of the antenna (I even added some little rubber feet to it).

But those nice looking low-profile black-anodized (or whatever) trunk-lip mounts from Commet and Diamond sure are appealing. Trouble is, by the time you pay for the mount, the special coax, and the antenna (dual band with gain figures similar to the Cushcraft) the whole package runs between \$130 and \$150.00!

So besides the cool appearance, are these antennas really any better than the \$70.00 Cushcraft? Does having them up away from the car on that little mount reduce the ground-plane effect?

If you have tried any of these combinations and have one you think is really worth the price, let me know so I can take it into consideration. Thanks.

--
Kevin Jessup, N9SQB "A bad day of DXing is better than a good day at work."

The U.S. Constitution defines the rights the people

give to the government, not the reverse!

Date: 8 Sep 93 01:12:37 GMT
From: ogicse!hp-cv!sdd.hp.com!col.hp.com!news.dtc.hp.com!srgenprp!
alanb@network.ucsd.edu
Subject: G5RV
To: ham-ant@ucsd.edu

The idea of the G5RV is that it presents a reasonably low SWR (below 3:1 or so) on the 5 "traditional" HF amateur bands *AT THE END OF THE TWIN LEAD*. The impedance at the feedpoint is nowhere near 50 ohms resistive on most bands, but after being transformed by the 300-ohm twin lead, it becomes reasonably close to 50 ohms resistive at the coax end. The twinlead acts as a matching network.

In the days of vacuum-tube transmitters with PI-network outputs, the SWR of the G5RV was generally low enough that you didn't need a separate tuner. However, most solid-state rigs are not happy with a 3:1 SWR. On the other hand, the G5RV is still useful in that it gets the SWR low enough to prevent excessive coax feedline loss. And it does make the job of the antenna tuner easier.

AL N1AL

Date: Wed, 8 Sep 1993 18:52:47 GMT
From: swrindle@sdd.hp.com!col.hp.com!news.dtc.hp.com!srgenprp!
alanb@network.ucsd.edu
Subject: G5RV
To: ham-ant@ucsd.edu

Joel B Levin (levin@bbn.com) wrote:
: levine@mc.com (Bob Levine, x247) writes:
: [someone wrote:]
: |>The moral of the story is: Throw away your lossey coax and bring
: |>ladder-line directly to the balanced output of an antenna tuner.

..
: So my thought was: build a standard dipole (I believe I can easily
: string a full 80-meter half-wave, but could go longer if I don't worry
: about trying to resonate on any useful frequency). Run ladder line as
: far as I practically can (so it would look something like a G5RV but
: there's no intention of using a specific length to act as a
: transformer). Attach coax (and some sort of balun) to run into the
: shack.

: Now instead of a long piece of coax to the antenna (lots of loss), or
: ladder line all the way to the tuner (low loss, so higher SWR doesn't
: matter so much), I'd have a lot of ladder line and a lot less coax, so
: I'd come out some where in between, maybe almost as good as using pure
: ladder line. So what (if anything) is wrong with this picture?

If you do that, be sure the ladder line is an integer multiple of 1/2 wavelength long (electrical length). If, for example, you used a quarter wavelength (or any odd multiple of 1/4 wave) of 300-ohm ladder line with a 50-ohm antenna, you would end up with $300^2/50 = 1800$ ohms at the coax end, a 36:1 SWR!

AL N1AL

Date: 8 Sep 1993 11:48:16 -0400
From: news!clarknet.clark.net!clarknet.clark.net!postmaster@uunet.uu.net
Subject: Helically-wound dipoles ??
To: ham-ant@ucsd.edu

I have seen articles on vertical helically wound antennas for hf bands but was wondering if anyone has seen articles or experimented with using horizontal helically wound elements for dipoles in the hf bands. My interest lies in space saving and low observable antennas that can be placed in an attic.

I would appreciate any references or discussion on this slinky aspect of 160m-10m dipoles. The current ARRL Handbook and Antenna Book barely touch on the subject.

thanks in advance !!

John A. Evans, Capt, USAF
VHDL/EDA Engineer

"My number one goal as a runner is to live long enough to place in my age group!!!"

HAM Callsign under construction x3xxx
(No-code Technician Test completed 5 Sep 93 - code to follow)

jaevans@clark.net Linux - the OS of choice !!

Once data encryption is outlawed, only outlaws will have data encryption !!!

Date: 8 Sep 93 00:59:13 GMT
From: ogicse!hp-cv!sdd.hp.com!col.hp.com!news.dtc.hp.com!srigenprp!
alanb@network.ucsd.edu
Subject: J-pole polarity
To: ham-ant@ucsd.edu

Greg Dolkas (greg@core.rose.hp.com) wrote:
: James Bach (c2xjcb@kocrsv01.delcoelect.com) wrote:
: :
: : Since the portion of the "mast" which is below the "tie point" of the
: : two pipes is not doing anything (it's past the short in the matching
: : stub) it's connection to ground (or lack thereof) does nothing ...

: That's the theory, but my results were different. I've built a copper pipe
: J-pole recently, and it all worked very well until I added about 12" to the
: 34" piece that attaches *below* the short. The position of the feed line
: became extremely critical and unreproducible.

Many people use a J-pole because they believe that, unlike a standard
1/4-wave ground plane antenna, "a J-pole does not need radials."
As you have discovered, that is not necessarily true.

To some extent, the "J" matching stub at the base acts as a single
1/4-wave radial. However, you can get still considerable feedline
current if the feedline (and connecting metal structures) happen
to be resonant.

WB6FRZ and I did some experiments awhile back comparing feedline
radiation of a J-pole to a 1/4-wave ground plane. They both showed
some feedline radiation when the feedline was a resonant length, but
the J-pole was much worse. Common-mode feedline current was almost
as great as the antenna current!

I don't remember which side of the "J" the coax shield was connected to.
I wouldn't expect it to make any difference.

AL N1AL

Date: Thu, 9 Sep 1993 03:53:52 GMT
From: swrinde@gatech!howland.reston.ans.net!usenet.ins.cwru.edu!news.ecn.bgu.edu!
feenix.metronet.com!marcgb@network.ucsd.edu
Subject: TH-3 Documentation wanted
To: ham-ant@ucsd.edu

I would like a copy of the TH-3 documentation if anyone has it. You can
fax it to me at 214-231-0025, or mail it. I'll figure out some way to

reciprocate for the phone call or mailing if necessary.

Thanks in advance,

--

Marc B. Grant, N5MEI | marcbg@feenix.metronet.com | 214/231-3998 (voice)
P.O Box 850472 | marcbg@esy.com | 214/231-0025 (fax)
Richardson, TX 75085 |

End of Ham-Ant Digest V93 #41
